

IN THE CLAIMS:

1. (Currently Amended) A method of cutting barbs on a suture having a longitudinal axis, said method comprising the steps of:

providing a suture;

providing a cutting blade;

~~providing a securing means for securing the suture for cutting;~~

twisting said suture along a y-axis prior to cutting;

creating a barb on said suture by the motion of the blade which takes into account a cutting action by the blade on the suture in three dimensions along x-y-z axes of the suture caused by blade geometry in conjunction with blade motion; and

providing a means for moving the blade to cause said cutting action to create the barb.

2. (Previously Presented) The method as described in claim 1 wherein the blade geometry causes a cutting action on the suture along two axes with the motion of the blade causing a cutting action along the remaining axis.

3. (Original) The method as described in claim 2 wherein the y-axis is a longitudinal axis of the suture, the x-axis is perpendicular to the longitudinal axis and the z-axis is at 90° with respect to the x-axis.

4. (Original) The method as described in claim 3 wherein the blade geometry causes a cutting action along the y and z axis with the blade motion causing a cutting action along the x-axis.

5. (Original) The method as described in claim 4 which includes providing a plurality of blades each of which creates a respective barb on the suture.

6. (Cancelled)

7. (Original) The method as described in claim 1 wherein the blade geometry causes a cutting action on the suture along one axis with the motion of the blade causing cutting along the remaining two axes.

8. (Original) The method as described in claim 7 wherein the y-axis is a longitudinal axis of the suture, the x-axis is perpendicular to the longitudinal axis and the z-axis is at 90° with respect to the x-axis.

9. (Original) The method as described in claim 8 wherein the blade geometry causes a cutting action along the z-axis with the blade motion causing a cutting action along the x and y axes.

10. (Original) The method as described in claim 9 which includes providing a plurality of blades each of which creates a respective barb on the suture.

11. (Cancelled)

12. (Original) The method as described in claim 1 wherein the y-axis is a longitudinal axis of the suture, the x-axis is perpendicular to the longitudinal axis and the z-axis is at 90° with respect to the x-axis.

13. (Currently Amended) The method as described in claim 12 A method of cutting barbs on a suture having a longitudinal axis, said method comprising the steps of:

providing a suture;

providing a cutting blade;

creating a barb on said suture by the motion of the blade which takes into account a cutting action by the blade on the suture in three dimensions along x-y-z axes of the suture; and

providing a means for moving the blade to cause said cutting action to create the barb,

wherein the motion of the blade causes cutting along the x-y-z axes.

14. (Original) The method as described in claim 13 which includes providing a plurality of blades each of which creates a respective barb on the suture.

15. (Original) The method as described in claim 14 which includes the further step of twisting said suture along the y-axis prior to cutting.

16. (Currently Amended) An apparatus for cutting barbs on a suture according to the method of claim 5, said apparatus comprising:

a cutting bed on which a suture is maintained in place, said suture having x-y-z axes wherein the y-axis is a longitudinal axis of the suture, the x-axis is perpendicular to the longitudinal axis and the z-axis is at 90° with respect to the x-axis;

means for causing a blade assembly to contact the suture in a predetermined manner; and said blade assembly comprising a plurality of cutting blades having a geometry, and means for moving said cutting blades along the x-axis of the suture at a plurality of locations with the movement of the blades and the blades' geometry, producing a plurality of barbs on said suture, wherein the blade geometry causes a cutting action on the suture along two axes with the motion of the blade causing a cutting action along the remaining axis.

17. (Currently Amended) An apparatus for cutting barbs on a suture according to the method of claim 6, said apparatus comprising:

a cutting bed on which a suture is maintained in place, said suture having x-y-z axes wherein the y-axis is a longitudinal axis of the suture, the x-axis is perpendicular to the longitudinal axis and the z-axis is at 90° with respect to the x-axis;

means for twisting said suture along a y-axis prior to cutting;

means for causing a blade assembly to contact the suture in a predetermined manner; and

said blade assembly comprising a plurality of cutting blades having a geometry, and means for moving said cutting blades along the x-axis of the suture at a plurality of locations with the movement of the blades and the blades' geometry, producing a plurality of barbs on said suture.

18. (Currently Amended) An apparatus for cutting barbs on a suture ~~according to the method of claim 10, said apparatus comprising:~~

a cutting bed on which a suture is maintained in place, said suture having x-y-z axes wherein the y-axis is a longitudinal axis of the suture, the x-axis is perpendicular to the longitudinal axis and the z-axis is at 90° with respect to the x-axis;

means for causing a blade assembly to contact the suture in a predetermined manner; and
said blade assembly comprising a plurality of cutting blades having a geometry, and means for moving said cutting blades in the x and y axes of the suture at a plurality of locations with the movement of the blades and the blades' geometry, producing a plurality of barbs on said suture, wherein the blade geometry causes a cutting action on the suture along two axes with the motion of the blade causing a cutting action along the remaining axis.

19. (Currently Amended) An apparatus for cutting barbs on a suture ~~according to the method of claim 11, said apparatus comprising:~~

a cutting bed on which a suture is maintained in place, said suture having x-y-z axes wherein the y-axis is a longitudinal axis of the suture, the x-axis is perpendicular to the longitudinal axis and the z-axis is at 90° with respect to the x-axis;

means for twisting said suture along a y-axis prior to cutting;

means for causing a blade assembly to contact the suture in a predetermined manner; and

said blade assembly comprising a plurality of cutting blades having a geometry, and means for moving said cutting blades in the x and y axes of the suture at a plurality of locations with the movement of the blades and the blades' geometry, producing a plurality of barbs on said suture.

20. (Currently Amended) An apparatus for cutting barbs on a suture ~~according to the method of claim 15, said apparatus comprising:~~

a cutting bed on which a suture is maintained in place, said suture having x-y-z axes wherein the y-axis is a longitudinal axis of the suture, the x-axis is perpendicular to the longitudinal axis and the z-axis is at 90° with respect to the x-axis;

means for causing a blade assembly to contact the suture in a predetermined manner; and said blade assembly comprising a plurality of cutting blades and means for moving said cutting blades in the x and y and z axes of the suture at a plurality of locations with the movement of the blades, producing a plurality of barbs on said suture, wherein the blade geometry causes a cutting action on the suture along two axes with the motion of the blade causing a cutting action along the remaining axis..

21. (Original) An apparatus for cutting barbs on a suture ~~according to the method of claim 16, said apparatus comprising:~~

a cutting bed on which a suture is maintained in place, said suture having x-y-z axes wherein the y-axis is a longitudinal axis of the suture, the x-axis is perpendicular to the longitudinal axis and the z-axis is at 90° with respect to the x-axis;

means for twisting said suture along a y-axis prior to cutting;

means for causing a blade assembly to contact the suture in a predetermined manner; and

said blade assembly comprising a plurality of cutting blades having a geometry, and means for moving said cutting blades in the x and y and ~~x z~~ axes of the suture at a plurality of locations with the movement of the blades, producing a plurality of barbs on said suture.

22. (Original) A method of cutting a barb on a suture, said method comprising the steps of:
 - providing a suture having a longitudinal axis;
 - twisting said suture along its longitudinal axis; and
 - cutting a barb on said suture when in its twisted state.
23. (Original) The method in accordance with claim 22 which includes the further step of cutting a plurality of barbs on said suture when in its twisted state.
24. (Currently Amended) A method of cutting barbs on a suture having a longitudinal axis, said method comprising the steps of:
 - providing a suture;
 - providing a cutting blade;
 - creating a barb on said suture by ~~the a~~ motion of the blade which takes into account a cutting action by the blade on the suture in three dimensions along x-y-z axes of the suture caused by blade geometry in conjunction with blade motion; and
 - providing a means for moving the blade to cause said cutting action to create the barb, wherein the blade geometry causes a cutting action on the suture along two axes with the motion of the blade causing a cutting action along the remaining axis.
25. (Previously Presented) The method as described in claim 24 wherein the y-axis is a longitudinal axis of the suture, the x-axis is perpendicular to the longitudinal axis and the z-axis is at 90° with respect to the x-axis.

26. (Previously Presented) The method as described in claim 25 wherein the blade geometry causes a cutting action along the y and z axis with the blade motion causing a cutting action along the x-axis.
27. (Previously Presented) The method as described in claim 26 which includes providing a plurality of blades each of which creates a respective barb on the suture.
28. (Previously Presented) The method as described in claim 27 which includes the further step of twisting said suture along the y-axis prior to cutting.
29. (Previously Presented) The method of claim 28 further comprising the step of providing a securing means for securing the suture for cutting, wherein said securing means provides for relative rotation as between the suture and the cutting blade.
30. (Currently Amended) The method as described in claim 31 4, wherein said securing means provides for relative rotation as between the suture and the cutting blade.
31. (New) the method as described in claim 1, further comprising a step of providing a securing means for securing the suture for cutting.